UNITED STATES DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE
NEW MEXICO PLANT **MATERIALS** CENTER
LOS LUNAS, NEW MEXICO

and

NEW MEXICO STATE UNIVERSITY
AGRICULTURAL SCIENCE CENTER AT LOS LUNAS
LOS LUNAS, NEW MEXICO

NOTICE OF RELEASE OF A SELECTION OF CANE BLUESTEM SELECTED CLASS OF GERMPLASM

The Natural Resources Conservation Service (NRCS), United States Department of: Agriculture and **New** Mexico State University (NMSU) Agricultural Science Center at Los Lunas announce the release of a selected class of cane bluestem (*Bothriochloa barbinodis*) (Heter) for the southwestern United States.

As a selected release, this germplasm will be referred to **as** the Grant germplasm cane bluestem. It has been assigned the NRCS accession number **9066390.** Grant germplasm is released **as** a selected class of certified seed (natural track).

The alternative release procedure is justified because existing commercial sources of cane bluestem are inadequate. The commercial sources that do exist have not been selected for performance under agronomic conditions. Propagation material of this species is needed for ecosystem restoration and enhancement and for beautification in urban and **rural** landscaping situations. The potential for immediate use is high. No commercial cultivars of cane bluestem have been previously released.

Collection Site Information: Grant germplasm **was** originally collected in **1982.** Accessions were collected **by** USDA-NRCS field office personnel from native stands in New Mexico and Arizona (Table 1).

Table 1. Collection sites of accessions making up the composite Grant germplasm of cane bluestem.

Accession Number	County & State	Elevation (ft)	MLRA	Collector
1. 399204	Pima AZ	3496		M. Lamoreaux
2. 9032338	Grant NM	6197	36	H. Bray
3. 9032398'	Socorro NM	4659	42	D. Reasner
4. 9032342	Grant NM	4898	36	H. Bray
5. 9032343	Grant NM	4678	36	H. Bray
6. 9032344	Grant NM	5279	36	H. Bray

Description: Grant germplasm cane bluestem is a coarse warm-season bunch grass. It is a large robust grass with foliage well distributed along the *stem.* Blades are 2-7 cm broad and 25-30 cm or more long. Plants may be 1.5 -2 m tall, depending upon environmental conditions. Flowering is from June to July.

Cane bluestem has been observed to be remarkably drought tolerant and is well adapted to southwestern rangeland. It has been classified as fair to good forage for cattle and wildlife. Cane bluestem has produced yields of approximately 4 metric tons/ha annually under dryland conditions. When green the total protein of cane bluestem forage is about 10%, however when dormant forage protein may drop to 4.5%. When grown under similar conditions cane bluestem and switchgrass (*Panicum virgatum* L.) compared favorably. Under drought conditions, cane bluestem produced more forage than switchgrass.

Methods of Breeding and/or Selection: Grant germplasm cane bluestem was selected from 21 accessions collected from New Mexico and Arizona. Accessions were individual populations that were collected by USDA-NRCS field office staff. From the initial accessions, *six* were selected for superior forage and seed yield. Equal amounts of seed from each accession were combined. The composite *mix* was seeded to become Grant germplasm.

Environmental Impact Assessment: Grant germplasm cane bluestem is a selection of naturally occurring germplasm. Grant germplasm did not meet the assessment of a plant, which could become invasive based on guidelines adopted by the NRCS Plant Materials Program.

Anticipated Conservation Use: The potential uses of the Grant germplasm include erosion control, wildlife food/cover, restoration of disturbed sites, increasing plant diversity of rangelands and for low water use beautification of urban and rural landscapes.

Anticipated Area of Adaptation: Cane bluestem is naturally occurring from Oklahoma to Arizona and Texas, and south into Mexico. It commonly grows on open rangelands, mesas, dry rocky or sandy slopes and open plains.

Availability of Plant Materials: Breeder and/or foundation seed will be maintained at the NRCS New Mexico Plant Materials Center. Seed will be distributed to interested growers through the New Mexico Crop Improvement Association.

References:

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5. Humphrey, R.R. 1960. Arizona range grasses their description, forage value and management. Arizona Agricultural Experiment Station Bulletin 298.

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